

Appl. No. 10/616,933
Amendment dated March 23, 2005
Reply to Office Action of Feb. 15, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Amend claim 7 as shown below.

1. (previously presented) An apparatus for eliminating dross from liquid solder in a solder pot of a soldering machine comprised of: a means for breaking up said dross into small particles and recirculating said liquid solder, said dross and a non-solder residue in said solder pot; a shroud having a lower opening in adjacent and covering relationship to a free surface of said liquid solder in said solder pot; a chemical de-oxidizing agent to separate said dross into liquid solder and said non-solder residue; and a vacuum source connected to said shroud for removing a portion of said non-solder residue when said portion of said non-solder residue is adjacent to said lower opening of said shroud.

2. (original) The apparatus recited in claim 1 further comprising a means in said solder pot for directing a flow of said liquid solder and said non-solder residue in said solder pot.

3. (original) The apparatus recited in claim 1 wherein said de-oxidizing agent is a mixture of a potassium salt and borohydrochloride.

4. (previously presented) The apparatus recited in claim 1 wherein said means for breaking up and recirculating said liquid solder, said dross and said non-solder residue is an impeller.

5. (previously presented) A method for eliminating dross from solder in a solder pot of a soldering machine comprised of the steps of; breaking up said dross into small particles and recirculating said solder, said dross and a non-solder residue in said solder pot; adding a chemical de-oxidizing agent to said solder pot to chemically divide said dross into liquid solder and said non-solder residue; and applying a vacuum to said non-solder residue to remove said non-solder residue from said solder pot.

6. (previously presented) An apparatus for eliminating dross from liquid solder in a solder pot of a soldering machine comprised of: an impeller for breaking up said dross into small particles and recirculating said liquid solder, said dross and said non-solder residue in said solder pot; a shroud having a lower opening in adjacent and covering relationship to a free surface of said liquid solder in said solder pot; a mixture of a

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potassium salt and borohydrochloride to separate said dross into liquid solder and said non-solder residue; and a vacuum source connected to said shroud for removing a portion of said non-solder residue when said portion of said non-solder residue is adjacent to said lower opening of said shroud.

7. (currently amended) A method for eliminating dross from liquid solder in a solder pot of a soldering machine comprising the steps of: adjusting a height of a dross reservoir in a solder pot to allow solder in said solder pot to flow into said reservoir; directing a flow of said solder with a solder guide toward a top of the solder pot to form a main solder wave; directing a flow of a portion of said solder into said dross reservoir; and mixing said solder in said dross reservoir with an anti-oxidant agent to separate dross in said solder pot from said solder.